

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for crystallization or dopant activation heat treatment of a semiconductor film films upon a thermally susceptible non-conducting substrates ~~comprises~~, substrate, comprising:

(a) installing an induction coil in close proximity of a semiconductor film films on a non-conducting substrate ~~substrates~~ lying onto a susceptor, ~~wherein the winding configuration of~~ ~~said induction coil is set in such a way being disposed so that the~~ electrical current direction of inductor is aligned parallel to the in-plane direction of said semiconductor films, film; and

(b) ~~inducing introducing~~ introducing an alternating electrical current in to said induction coil to introduce generate an alternating magnetic field to through said semiconductor film films heated by said susceptor to the extent that the said semiconductor film films can be induction-heated.

2. (currently amended) The method of claim 1 wherein said semiconductor film is an films ~~are silicon~~ films ~~being amorphous silicon~~ film films ~~or a~~ crystalline silicon film films, and wherein said thermally susceptible non-conducting substrate is a ~~substrates~~ are glass and or a plastic substrate ~~substrates~~.

3. (currently amended) The method of claim 2 wherein said silicon films ~~are~~ film is an amorphous film films deposited onto the glass said substrate for the purpose of crystallization, or

a polycrystalline film ~~films~~ ion-implanted with a ~~dopant~~ (n-type or a p-type) dopant for the purpose of electrical activation.

4. (currently amended) The apparatus method of claim 1 wherein the alternating frequency of said alternating current ~~of~~ in said induction coil ~~is ranged from~~ varies between 10 Hz ~~to~~ and 10 MHz.

5. (currently amended) The method of claim 2 3 wherein ~~crystallization of amorphous silicon~~ is film is deposited onto said substrate through solid phase crystallization, metal-induced crystallization, and/or metal-induced lateral crystallization.

6. (currently amended) An apparatus for heat treatment of a semiconductor film ~~films~~ upon a thermally susceptible non-conducting ~~substrates~~ comprises, substrate, comprising:

(a) an induction coils coil installed in close proximity ~~of~~ to a semiconductor film ~~films~~ on a non-conducting substrate ~~substrates~~, wherein the winding configuration of said induction coil is set in such a way that the current so that the electrical current direction ~~of inductor~~ is aligned parallel to the in-plane direction of said semiconductor film, film; and

(b) a susceptor installed below said non-conducting substrates, wherein the susceptor heats the substrate to heat said semiconductor film ~~films~~ to the extent that the said semiconductor film ~~films~~ can be induction-heated.

7. (currently amended) The apparatus of Claim 6 wherein said semiconductor films ~~are~~ film is a silicon film ~~films~~ deposited on ~~the~~ glass said substrate, in the form of either amorphous

state crystallizing into polycrystalline in the case of crystallization heat treatment, or polycrystalline state implanted by ~~dopants~~ + an n type or a p type dopant + in the case of dopant activation heat treatment.

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8. (currently amended) The apparatus of ~~claim~~ claim 6 wherein said susceptor is made of metal or graphite with a high conductivity providing the *in-situ* heating capability to the susceptor under the alternating magnetic field through a heating mechanism of eddy currents (i.e., induction heating).

9. (currently amended) The apparatus of ~~claim~~ claim 6 wherein said susceptor is made of an electrically ~~non-conductor~~ nonconductive material for preventing the susceptor from being heated ~~under the by an~~ alternating magnetic field generated by said coil, and the wherein said susceptor is designed to be independently heated using an external heat source such as a resistance heater or a lamp heater.

10-16. (withdrawn)